

ABSTRACT OF THE DISCLOSURE

The method and apparatus for making a micro-dispersed gas-liquid mixture which includes a gas-liquid ejector unit, a cavitation unit and a jet dispersing unit installed in a sequence. All above referenced units are installed into a cylindrical housing which in turn includes bottom and top covers and also has a first partition having a conical orifice separating a gas-liquid ejector unit from a cavitation unit and a second partition separating a cavitation unit from a jet dispersing unit. The gas-liquid ejector unit has an inlet located at the bottom of the cylindrical housing for liquid and the inlet located on side surface of housing for gas, these being between bottom cover of the housing and the first partition. In addition, the inlet for liquid is a nozzle the top having both outside and inside parts of which are adapted to the conical orifice of first partition to provide a required flow-rate of an ejected gas through the gas inlet. The gas-liquid ejector unit communicates through the conical orifice of the first partition with a cavitation unit comprising a hollow cylindrical cavitation chamber having at least one tangential inlet allowing a gas-liquid mixture from a gas-liquid ejector unit to flow inside the hollow cylindrical cavitation chamber for breaking of gas bubbles and further to a jet dispersing unit through an orifice of second partition for additional dispersing and homogenization. The jet dispersing unit comprises a hollow cylindrical dispersing chamber attached to the second partition and communicates with the injection well through an outlet located at the top cover of the cylindrical housing. In addition, the hollow cylindrical dispersing chamber has at least one outlet channel and a hollow dip at the bottom of the hollow cylindrical dispersing chamber.